Subpart C—Injectable Dosage Forms

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Subpart A—Bulk Drugs

§ 442.4 Cefaclor monohydrate.

(a) *Requirements for certification*—(1) *Standards of identity, strength, quality, and purity.* Cefaclor monohydrate is the monohydrate form of (6*R*, 7*R*)-7-[(*R*)-2-amino-2-phenylacetamido]-3-chloro-8-oxo-5-thia-1-azabicyclo [4.2.0]oct-2-ene-2-carboxylic acid. It is so purified and dried that:

(i) Its potency is not less than 860 micrograms and not more than 1,050 micrograms of cefaclor per milligram on an ''as is'' basis.

(ii) Its moisture content is not less than 3.0 percent and not more than 8.0 percent.

(iii) Its pH in an aqueous suspension containing 25 milligrams per milliliter is not less than 3.0 and not more than 4.5.

(iv) It gives a positive identity test.

(v) It is crystalline.

(2) *Labeling.* It shall be labeled in accordance with the requirements of § 432.5 of this chapter.

(3) *Requests for certification; samples.* In addition to complying with the requirements of § 431.1 of this chapter, each such request shall contain:

(i) Results of tests and assays on the batch for potency, moisture, pH, identity, and crystallinity.

(ii) Samples required: 10 packages, each containing approximately 300 milligrams.

(b) *Tests and methods of assay*—(1) *Potency.* Use either of the following methods; however, the results obtained from the hydroxylamine colorimetric assay shall be conclusive.

(i) *Microbiological agar diffusion assay.* Proceed as directed in § 436.105 of this chapter, preparing the sample for assay as follows: Dissolve an accurately weighed sample in sufficient 1 percent potassium phosphate buffer, pH 6.0 (solution 1), to obtain a stock solution containing 1 milligram of cefaclor per milliliter (estimated). Further dilute an aliquot of the stock solution with solution 1 to the reference concentration of 5.0 micrograms of cefaclor per milliliter (estimated).

(ii) *Hydroxylamine colorimetric assay.* Proceed as directed in § 442.40(b)(1)(ii) of this chapter, except prepare the working standard and sample solutions

and calculate the cefaclor content as follows:

(*a*) *Preparation of working standard solution.* Dissolve and dilute an accurately weighed portion of the cefaclor working standard in sufficient 0.1*M* potassium phosphate buffer, pH 4.5 (as described in §436.101(a)(4) of this chapter) to obtain a concentration of 1 milligram of cefaclor per milliliter.

(*b*) *Preparation of sample solution.* Dissolve an accurately weighed portion of the sample in sufficient 0.1*M* potassium phosphate buffer, pH 4.5 (as described in §436.101(a)(4) of this chapter) to obtain a concentration of 1 milligram of cefaclor per milliliter.

(*c*) *Calculations.* Calculate the cefaclor content in micrograms per milligram as follows:

$$\text{Micrograms of cefaclor per milligram of sample} = \frac{A_u \times P_a}{A_s \times W_u}$$

where:

A_u = Absorbance of sample solution;
P_a = Potency of working standard solution in micrograms per milliliter;
A_s = Absorbance of working standard solution;
W_u = Milligrams of sample per milliliter of sample solution.

(2) *Moisture.* Proceed as directed in §436.201 of this chapter.

(3) *pH.* Proceed as directed in §436.202 of this chapter, using an aqueous suspension containing 25 milligrams per milliliter.

(4) *Identity.* Proceed as directed in §436.211 of this chapter, using the sample preparation described in paragraph (b)(2) of that section.

(5) *Crystallinity.* Proceed as directed in §436.203(a) of this chapter.

[46 FR 3832, Jan. 16, 1981]

§442.6 Cefadroxil monohydrate.

(a) *Requirements for certification*—(1) *Standards of identity, strength, quality, and purity.* Cefadroxil monohydrate is 7-[D-2-amino-2(*p*-hydroxyphenyl)acetamido] - 3 - methyl - 8 - oxo- 5-thia-1-azabicyclo[4.2.0] oct-2-ene-2-carboxylic acid monohydrate. It is so purified and dried that:

(i) Its potency is not less than 900 micrograms and not more than 1,050 micrograms of cefadroxil per milligram on an anhydrous basis.

(ii) [Reserved]

(iii) Its moisture content is not less than 4.2 percent and not more than 6.0 percent.

(iv) Its pH in an aqueous solution containing 50 milligrams per milliliter is not less than 4.0 and not more than 6.0.

(v) When calculated on an anhydrous basis, its absorptivity at 264 nanometers is not less than 95 percent and not more than 104 percent of that of the cefadroxil standard similarly treated and corrected for potency.

(vi) It passes the identity test.

(vii) It is crystalline.

(2) *Labeling.* It shall be labeled in accordance with the requirements of §432.5 of this chapter.

(3) *Requests for certification; samples.* In addition to complying with the requirements of §431.1 of this chapter, each such request shall contain:

(i) Results of tests and assays on the batch for potency, moisture, pH, absorptivity, identity, and crystallinity.

(ii) Samples required: 10 packages, each containing approximately 500 milligrams.

(b) *Tests and methods of assay*—(1) *Potency.* Use either of the following methods; however, the results obtained from the hydroxylamine colorimetric assay shall be conclusive.

(i) *Microbiological agar diffusion assay.* Proceed as directed in §436.105 of this chapter, preparing the sample for assay as follows: Dissolve an accurately weighed sample in sufficient 1 percent potassium phosphate buffer, pH 6.0 (solution 1), to give a stock solution of convenient concentration. Further dilute an aliquot of the stock solution with solution 1 to the reference concentration of 20 micrograms of cefadroxil per milliliter (estimated).

(ii) *Hydroxylamine colorimetric assay for cefadroxil.* Proceed as directed in §442.40(b)(1)(ii) of this chapter, except prepare the working standard and sample solutions and calculate the potency of the sample as follows:

(*a*) *Preparation of working standard solutions.* Dissolve and dilute an accurately weighed portion of the cefadroxil working standard in sufficient distilled water to obtain a stock